

Appl. No. 10/090,576
Amdt. Dated Jan. 31, 2005
Reply to Final Office Action of December. 02, 2004

REMARKS/ARGUMENTS

This amendment is responsive to the Final Office action mailed on December 02, 2004. In the Final Office actions claims 1, 3, 4, 6, 7, 16 and 17 were rejected under 35 U.S.C. §102 (e) as being anticipated by Kreizman et al. (U.S. Patent No. 6, 117, 088, hereinafter "Kreizman"), claims 8, 10, 11, 13-15, were rejected under 35 U.S.C. §103 (a) as being unpatentable over Kreizman in view of Yoon et al. (U. S. Patent No. 5, 226, 426, hereinafter "Yoon") and claim 18 was rejected under 35 U.S.C. §103 (a) as being unpatentable over Kreizman in view of van Hollen et al. (U.S. Patent No. 6, 086, 247, hereinafter "van Hollen"). Claims 2 and 9 were objected to but were deemed allowable if rewritten in independent form.

In this amendment, independent claims 1, 8 and 16 have been amended to recite the subject matter more clearly. No new matter has been added.

Claims 1-4, 6-11, 13-18 remain pending in this application. Reconsideration in light of the above amendments and the following remarks is respectfully requested.

Claims define allowable subject matter over the applied art

Claims 1, 3, 4, 6, 7, 16 and 17 were rejected under 35 U.S.C. §102 (e) as being anticipated by Kreizman. Applicant has carefully re-reviewed the applied reference, and has amended the independent claims 1 and 16 to recite the subject matter more clearly in order to distinguish from the applied reference. Applicant respectfully traverses the rejection of independent claims 1 and 16, as amended, under 35 U.S.C. §102 as being anticipated by Kreizman. To anticipate a claim under 102, each and every element of the claim must be taught by the reference.

Applicant respectfully submits that Kreizman does not teach, disclose or suggest the claim recitations of "microscopic thermal sensors", "microscopic electrical output leads" or "sense in situ the temperature of biological matter" as recited in the amended independent claim 1 or the recitation of "sensing in situ temperatures of the biological matter" as recited in the amended independent claim 16.

Applicant would like to reiterate that the Applicant's invention is used for pre-treatment, early detection of tumors and deals with an in situ temperature profile measuring probe. The measuring probe in Applicant's invention has arrays of sensors which are microscopic in size and are capable of measuring small temperature differences in and around breast tumors to enable diagnosis of cancer at an early stage (support for this can be found in the section 'Brief summary of the Invention', lines 20-30 on Page 3, line 1 on Page 5, and in the section 'Detailed Description of the Invention', lines 27 on Page 8). Kreizman merely appears to describe a construction

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of a thermocouple array, for use in hyperthermic medical treatment of a tissue, in which the affected tissue is heated for regression or remission of the tumors (column 1, lines 15-25). In this treatment process, it is required to control and measure the temporal and spatial characteristics of the absorbed thermal dose (column 1, lines 15-35). For this purpose, more specifically, Kreizman describes a panel connector including a base with the printed circuit thermocouple arrangement (column 2, lines 20-35). As it would be evident to one skilled in the art, the panel connector is used *externally* during the hyperthermic treatment, typically on skin surface, i.e. it is not used in situ as described in Applicant's invention. Kreizman further teaches away from 'microscopic' recitations of the amended claim 1, in column 1, lines 56-68, by suggesting that "These sensors are connected to a measuring circuit via small conductive leads. The handling, strain relief, termination of small wires is difficult, expensive and not very reliable. Thus, because such probes tend to be very small so as to be minimally invasive when inserted into a patient, the manufacturing costs of affixing the sensors to the probe and the threading of leads in the probe are likely to be very high, making such probes expensive to purchase." Thus Kreizman is completely devoid of any teaching, disclosure or suggestion that can lead to the above mentioned claim recitations of independent claims 1 and 16, as amended.

Thus the Applicant respectfully submits that the independent claims 1 and 16, as amended are not anticipated by Kreizman under 35 U.S.C. §102 and therefore, are allowable. Claims 3, 4, 6, 7 depend directly or indirectly from claim 1, and claim 17 depends directly from claim 16. Thus claims 3, 4, 6, 7 and 17 are similarly allowable.

Claims 8, 10, 11, 13-15 were rejected under 35 U.S.C. §103 (a) as being unpatentable over Kreizman in view of Yoon. Applicant respectfully traverses the rejection of independent claim 8, as amended, under 35 U.S.C. § 103(a) as being unpatentable over Kreizman in view of Yoon.

To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art.

Applicant respectfully submits, that as explained above, in relation with the 102 argument, Kreizman similarly does not teach, suggest or disclose the claim recitations of "an in situ measuring probe", "microscopic thermal sensors", "microscopic electrical output leads" or "sense in situ the temperature of biological matter" of independent claim 8, as amended.

The secondary reference of Yoon does not overcome the above noted deficiencies of Kreizman. Yoon merely describes a surgical safety penetrating instrument including a tubular needle and a movable probe. Yoon does not deal with temperature measurement. Applicant respectfully submits that there is no motivation in Kreizman that would lead to combining it with Yoon. Further, regardless of what Yoon discloses, the above mentioned claim recitations of the amended independent claim 8 are still not described in Yoon. Therefore, the

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combination of Yoon with Kreizman will not yield the Applicant's invention as recited in independent claim 8, as amended.

Accordingly, Applicant respectfully submits that independent claim 8, as amended, defines allowable subject matter over the applied art. Claims 10, 11, 13-15 depend directly or indirectly from claim 8. Applicant respectfully submits that claim 8 is patentably distinct from the applied references for the reasons discussed above and that claims 10, 11, 13-15 are similarly allowable over the applied references.

Claim 18 was rejected under 35 U.S.C. §103 (a) as being unpatentable over Kreizman in view of van Hollen. Applicant respectfully submits that as explained above, in relation with the 102 argument, Kreizman does not teach, suggest or disclose the claim recitation of independent claim 16, as amended. Specifically Kreizman does not teach, suggest or disclose the following claim recitations of "sensing in situ temperatures of the biological matter at the spaced apart locations within the biological matter;" independent claim 16, as amended. The secondary reference of van Hollen does not overcome the above noted deficiencies of Kreizman. van Hollen merely describes a differential temperature sensor device for detecting differential temperatures in a human breast with improved contact between the sensor and the breast. Again, as in Kreizman, the device described in van Hollen is for external use and not for in situ applications. Thus the above mentioned claim recitations of independent claim 16, as amended, are still not described in van Hollen. Therefore, the combination of van Hollen with Kreizman will not yield the Applicant's invention as recited in independent claim 16, as amended. Thus, the Applicant respectfully submits that independent claim 16 defines allowable subject matter over the applied art. Claim 18 depends indirectly from claim 16 and is similarly allowable.

Accordingly, Applicant respectfully submits that the Final Office Action did not make a prima facie case of obviousness for the independent claims 8 and 16, as amended. Claims 10, 11, 13-15 depend directly or indirectly from claim 8 and claim 18 depends indirectly from claim 16. Applicant respectfully submits that amended independent claims 8 and 16 are patentably distinct from the applied references for the reasons discussed above and that claims 10, 11, 13-15, and 18 are similarly allowable over the applied references.

In view of the foregoing remarks, Applicants respectfully request withdrawal of the rejections under 35 USC 102(e) and 103(a).

Summary

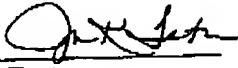
In view of the foregoing, Applicant respectfully submits that the application is in condition for allowance. Favorable reconsideration and prompt allowance of the application are respectfully requested.

Should the Examiner believe that anything further is needed to place the application in even better

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condition for allowance, the Examiner is requested to contact applicant's undersigned representative at the telephone number below.

Respectfully submitted,

By 
Jean Testa
Reg. No. 39,396
General Electric Company
Building K1, Room 3A62
Schenectady, New York 12301
Telephone: (518) 387-5115